



memorandum

DATE: June 16, 2005

Audit Report No.: OAS-L-05-08

REPLY TO
ATTN OF: IG-30 (A04DN002)

SUBJECT: Department of Energy's Implementation of its Chronic Beryllium Disease Prevention Program

TO: Assistant Secretary for Environment, Safety and Health

INTRODUCTION AND OBJECTIVE

The Department of Energy (Department) used beryllium in many nuclear operations and processes. While useful because of its strength and light weight, the material can be hazardous. Exposure to it can lead to beryllium sensitization, an allergic reaction which may make an individual susceptible to Chronic Beryllium Disease (beryllium disease), an often debilitating and sometimes fatal lung condition. There is no known cure for beryllium disease.

In response to concerns regarding the increased recognition of the risk of beryllium disease, the Department published a rule in the Code of Federal Regulations (CFR) at 10 CFR 850 establishing a Chronic Beryllium Disease Prevention Program (Prevention Program). The Department's Office of Environment, Safety and Health (EH) is responsible for developing Prevention Program policy, while Department sites are responsible for implementation. The Prevention Program became effective in January 2000 and full compliance by sites was expected within 2 years. The Prevention Program required sites to develop and implement a plan to minimize worker exposure. The Department established the Prevention Program as a proactive effort to create worker protection and medical surveillance requirements more stringent than those of the Federal Occupational Safety and Health Administration. Because of the importance of worker safety, we initiated this audit to evaluate the Department's progress in implementing its Prevention Program.

CONCLUSIONS AND OBSERVATIONS

The Department is making progress in implementing its Prevention Program. For example, sites have established formal medical surveillance programs and stringent protection requirements for work in beryllium contaminated areas. In addition, sites performed detailed root cause analyses when worker exposure was above Prevention Program exposure limits. However, we noted opportunities for the Department to

strengthen implementation by addressing Prevention Program policy weaknesses and determining Prevention Program applicability to certain workers.

Policy Weaknesses

We noted that additional guidance is needed to ensure consistent application of the Prevention Program at all Department sites. For example, the Prevention Program requires sites to compile an inventory of facilities to determine whether potential beryllium contamination exists. However, current Department policy lacks specific information needed for sites to compile beryllium facility inventories, such as what information sites should use to add a facility to the inventory. Specifically, site industrial hygienists were unsure whether a facility should be added when an employee believes beryllium was kept or used in a facility, when beryllium use was verified, or when air and surface contamination levels were analyzed. To illustrate this point, the Office of Inspector General issued a letter report (INS-L-05-04, dated June 3, 2005) referencing concerns over beryllium contamination that occurred at a Department facility. The report noted that it took 16 months to complete the characterization and inventory of this facility after contamination was discovered. Further, the report noted the lack of guidance to aid in the timely completion of such characterizations and inventories. However, sites have undertaken a number of positive actions to identify beryllium-contaminated facilities, such as performing detailed sampling and characterization of facilities as part of their site inventories.

The Department's policy also lacks specificity in areas such as sampling strategies (e.g., how to sample in elevated areas such as ventilation systems) and methodologies (e.g., use of wet versus dry sampling methods) for contaminated facilities and equipment, which continue to create questions for site health and safety officials. In August 2002, the Department established a working group consisting of representatives from EH and site industrial hygienists that identified these and other policy weaknesses. Although the Department stated its intent to initiate action to correct policy weaknesses, its efforts remained incomplete after more than 2 years. EH reiterated its intent to address the policy weaknesses in a December 2003 memorandum between the Assistant Secretary for Environmental, Safety and Health and the Administrator for the National Nuclear Security Administration. Nonetheless, the Department has not addressed the weaknesses identified by the working group.

Prevention Program Applicability

While the Department has made progress in identifying and providing Prevention Program protections for workers at its sites, at the time of our audit, it had not yet determined the extent to which the Prevention Program was applicable to the Paducah (Paducah) and Portsmouth (Portsmouth) Gaseous Diffusion Plants. While these sites

are now operated by the United States Enrichment Corporation (USEC), beryllium contamination has been discovered from legacy production activities performed by the Department. The Department was not aware of beryllium contamination issues when USEC assumed operational control and the Prevention Program was not established until several years after the transfer. The use of beryllium at the two sites, such as in legacy activities involving Work for Others at Paducah and incidental machining of beryllium at Portsmouth, has been confirmed in recent years. Like other Department sites, Paducah and Portsmouth have begun, but not completed, inventories of beryllium facilities. The risk of exposure remains a concern, and in July 2004 Portsmouth had a worker exposure above the Prevention Program limit due to the hazardous nature of the work being done. Paducah and Portsmouth union officials have also expressed concern about the lack of Prevention Program coverage for USEC workers, some of whom are prior Department employees.

The Department told us it recognized these issues and had initiated actions to address these concerns. For example, officials from the Department's Portsmouth/Paducah Project Office indicated that they were working with USEC and officials from Department Headquarters program offices to address these issues. Nonetheless, the issues have not been resolved. Until the extent of applicability is determined, USEC workers at Paducah and Portsmouth may not receive similar benefits, such as medical monitoring and surveillance benefits. For instance, USEC workers are only entitled to one beryllium-related medical examination, while the Prevention Program allows ongoing medical examinations.

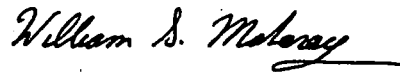
SUGGESTED MANAGEMENT ACTIONS

To address policy and implementation issues outlined in our report, we suggest that the Assistant Secretary for Environment, Safety and Health coordinate with cognizant Department program and oversight offices to:

1. Implement actions to address Prevention Program policy weaknesses identified by the working group;
2. Ensure site facility inventories are current, accurate, and complete; and,
3. Address beryllium-related coverage at Paducah and Portsmouth.

We discussed the audit results with EH and Department Headquarters program office officials in June 2005. Since no formal recommendations are being made in this letter

report, a formal response is not required. We appreciate the cooperation of your staff during the audit.



William S. Maharay
Deputy Inspector General
for Audit Services
Office of Inspector General

cc: Under Secretary for Energy, Science and Environment
Chief of Staff
Administrator, National Nuclear Security Administration
Director, Office of Nuclear Energy, Science and Technology
Director, Office of Science
Director, Office of Security and Safety Performance Assurance
Team Leader, Audit Liaison Team, ME-100

SCOPE AND METHODOLOGY

The audit was conducted from November 2003 to May 2005 at the following Department sites:

- Hanford Site, Richland, Washington;
- Kansas City Plant, Kansas City, Missouri;
- Los Alamos National Laboratory, Los Alamos, New Mexico;
- Paducah Gaseous Diffusion Plant, Paducah, Kentucky;
- Pantex Plant, Amarillo, Texas;
- Portsmouth Gaseous Diffusion Plant, Piketon, Ohio;
- Rocky Flats Closure Project, Golden, Colorado; and,
- Y-12 National Security Complex, East Tennessee Technology Park, and Oak Ridge National Laboratory, all in Oak Ridge, Tennessee.

The auditors also obtained summary information from other sites in the Department:

- Argonne National Laboratory, Argonne, Illinois;
- Argonne-West National Laboratory, Idaho Falls, Idaho;
- Fernald Closure Project near Ross, Ohio;
- Lawrence Livermore National Laboratory, Livermore, California;
- Miamisburg Closure Project, Miamisburg, Ohio;
- Nevada Test Site's Nevada Site Office, Las Vegas, Nevada;
- Sandia National Laboratories, Albuquerque, New Mexico; and,
- Savannah River Site, Aiken, South Carolina.

To accomplish our objective, we held discussions with local site Department and contractor officials, site union representatives, and officials from Department Headquarters programmatic offices; reviewed site-specific plans and documentation of local site actions to minimize worker exposure as stipulated in Prevention Program policy; compared local site implementation efforts to Prevention Program policy; determined the adequacy and completeness of aspects of Prevention Program policy and guidance; and, reviewed the *Government Performance and Results Act of 1993* and determined if performance plans and measures had been established.

The audit was performed in accordance with generally accepted Government auditing standards for performance audits and included tests of internal controls and compliance with laws and regulations to the extent necessary to satisfy the audit objective. The Department did not establish specific beryllium-related performance standards; therefore, we could not assess how they might have been used to measure performance. Because our review was limited, it would not necessarily have disclosed all internal control deficiencies that may have existed at the time of our audit. Computer-processed data was not considered critical to our audit objective; therefore, we did not test the reliability of the data. We discussed the audit results with Department management officials in June 2005.

Miller, Cindy

From: Garland-Smith, Judy
Sent: Tuesday, June 28, 2005 10:48 AM
To: Miller, Cindy
Subject: request reports

Due to Judy on the - sent on 6/30/05

Hi Cindy can you help me with this request for Access to DOE OIG Report OAS-L--05-08, IG-30 (A04DN00 8)
--- June 16, 2005

Dear Sir or Madam:

Please provide a copy or access to the subject document.

Thank you,

Dan Ruggles

United States Enrichment Corp.

P.O. Box 628, MS-2209

3930 U.S. Route 23 South

Piketon, OH 45661

Judy Garland-Smith

*Reports Manager
Department of Energy
Office of Inspector General
Office of Resource Management*



6/28/2005



Department of Energy

Washington, DC 20585

July 13, 2005

MEMORANDUM FOR WILLIAM S. MAHARAY

DEPUTY INSPECTOR GENERAL FOR AUDIT SERVICES
OFFICE OF INSPECTOR GENERAL

FROM

MICHAEL A. KILPATRICK

Michael A. Kilpatrick
DIRECTOR, OFFICE OF INDEPENDENT OVERSIGHT
OFFICE OF SECURITY AND SAFETY
PERFORMANCE ASSURANCE

SUBJECT

Department of Energy's Implementation of the Chronic Beryllium
Disease Prevention Program Report, #OAS-L-05-08

The Office of Independent Oversight and Performance Assurance (OA), within the Office of Security and Safety Performance Assurance, has received and distributed the subject report to key OA staff members. The information concerning this important issue will be useful to our staff as we continue to review the safety and health programs of sites across the Department of Energy complex. While we agree that the Department has made progress in identifying and providing prevention strategies for workers, more can be done to improve the Chronic Beryllium Disease Prevention Program process. We will continue to review safety programs that have identified Beryllium as a regulatory program requirement and will also continue to use your suggested management actions in our review process.

If you have any questions, please contact me at (202) 586-4399, or your staff may contact Dr. Patricia R. Worthington, OA's Director of Environment, Safety and Health Evaluations, at (301) 903-5392.

cc:

G. Podonsky, SP-1

G. Friedman, IG-1

J. Hartman, IG-20

P. Worthington, OA-40

T. Staker, OA-40

M. Mielke, OA-40



United States Government

Department of Energy

memorandum

DATE: June 16, 2005

REPLY TO

ATTN: IG-36

SUBJECT: Final Report Package for "Department of Energy's Implementation of its Chronic Beryllium Disease Prevention Program"

TO: Linda Snider, Director, Planning and Administration

Attached is the required final report package on the subject audit. The pertinent details are:

1. Actual Staff Days: N/AActual Elapsed Days: 567

2. Names of OIG audit staff:

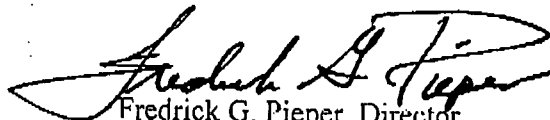
Assistant Director: Fredrick Pieper

Team Leader: Mark Mickelson

Auditor-in-Charge: James Franco

Audit Staff: Lisa Hansen

3. Coordination with Investigations and Inspections: Report was coordinated with Reggie France, Investigations Point of Contact, and Fatima Pashaei, Inspections Point of Contact, on June 9, 2005.



Fredrick G. Pieper, Director
Environmental Audits Division
Office of Inspector General

Attachments:

1. Final Report
2. Monetary Impact Report
3. Audit Project Summary Report
4. Audit Database Information Sheet

MONETARY IMPACT OF REPORT NO.: OAS-L-05-08

1. Title of Audit: The Department of Energy's Implementation of Its Chronic Beryllium Disease Prevention Program

2. Division: Environmental Audits Division

3. Project No.: A04DN002

4. Type of Audit:

Financial: _____

Performance: X

Financial Statement _____

Economy and Efficiency _____

Financial Related _____

Program Results X

Other (specify type): _____

5. Please report monetary savings identified in the report. If unable to quantify monetary savings at this time, please identify any potential future impact on audited activities/locations in the remarks section below.

FINDING		COST AVOIDANCE		QUESTIONED COSTS				MGT. POSITION	POTENTIAL BUDGET IMPACT
(A)	(B) Title	(C) One Time	(D) Recurring Amount Per Year	(E) Questioned	(F) Unsup-ported	(G) Unre-solved	(H) Total (E)+(F)+(G)	(I) C=Concur N=Noncon U=Undec	(J) Y=Yes N=No
	Department could improve implementation of its Chronic Beryllium Disease Prevention Program.	\$0					\$0		N
TOTALS-ALL FINDINGS		\$0					\$0		

6. Remarks: None.

7. Contractor: _____

8. Contract No.: _____

9. Task Order No.: _____

10. Approvals:

Division Director/Date: [Signature] 8/1/05

Technical Advisor & Date: [Signature]

Office of the Inspector General (OIG)
Audit Project Office Summary (APS)

Report run on: July 30, 2005 6:17 PM

Page 1

Audit#: A04DN002 Ofc: DNA Title: IMPLEMENTATION OF BERYLLIUM WORKER EXPOSURE

**** Milestones ****

	Planned	End of Survey	Revised	Actual
Entrance Conference:.....	01-OCT-03		06-NOV-03	06-NOV-03
Survey:.....			11-FEB-04	11-FEB-04
Draft Report:.....	17-MAY-04			
Completed (With Report):..	30-SEP-04	11-FEB-04	17-JUN-05	16-JUN-05 (R)
-----Elapsed Days:	365	97	589	588
			Elap. Less Susp:	567

Date Suspended: 10-NOV-04

Date Terminated:

Date Reactivated: 01-DEC-04

Date Cancelled:

DaysSuspended(Cur/Tot): 0 (21) Report Number: OAS-L-05-08

Rpt Title:

Report Type: LTR LETTER REPORT

DEPARTMENT OF ENERGY'S IMPLEMENTATION OF ITS CHRONIC BERYLLIUM DISEASE PREVENTION PROGRAM.

**** Audit Codes and Personnel ****

Class: PER PERFORMANCE

Function: Not Found

MgtChall: 120 WORKER/COMMUNITY SAF

Site: MSA MULTI-SITE AUDIT

AD: 496 PIEPER

SecMiss: Not Found

AIC: 574 FRANCO

PresInit: Not Found

Team Ldr: 342 MICKELSEN

Tech Adv: 544 ACTON

**** Task Information ****

Task No:

Task Order Dt:

CO Tech. Rep:

Orig Auth Hrs:

Orig Auth Costs:

Current Auth:

Current Auth Cost:

Tot Actl IPR Hr:

Tot Actl Cost:

**** Time Charges ****

Emp/Cont Name	Numdays	Last Date
WEBB, G	0.5	01-NOV-03
SERRANO, S	5.6	11-JUN-05
MICKELSEN, M	40.1	25-JUN-05
HANSEN, L	133.8	21-AUG-04
FRANCO, J	231.8	
Total:	411.8	

Office of the Inspector General (OIG)
Audit Project Office Summary (APS)

Report run on: July 30, 2005 6:17 PM

Page 2

**** Keywords ****

BERYLLIUM SENSITIZATION

CHRONIC BERYLLIUM DISEASE PREVENTION PROGRAM

**** Location Information ****

LocCodeDescription

KCA KANSAS CITY SITE OFFICE (
KCP KANSAS CITY PLANT
RFA ROCKY FLATS FIELD OFFICE
RFC ROCKY FLATS ENVIRONMENTAL

****Finding Information ****

Find#TitleType AmountYrsBud
ImpMgt
PosDept
PosDept
AmountDept
Date

Office of the Inspector General (OIG)
Audit Project Office Summary (APS)

Report run on: July 30, 2005 6:17 PM

Page 3

Audit History

Audit No: A04DN002

History Date: 07-JUL-05

History Text:

PB/ ENTERED COMPLETED WITH REPORT DATE.

AUDIT DATABASE INFORMATION SHEET

1. Project No.: A04DN002
2. Title of Audit: The Department of Energy's Implementation of its Chronic Beryllium Disease Prevention Program
3. Report No./Date OAS-L-05-08; June 16, 2005
4. Management Challenge Area: Performance Management, Worker and Community Safety
5. Presidential Mgmt Initiative: None
6. Secretary Priority/Initiative: None
7. Program Code: (EH-3) Worker Health and Safety
8. Location/Sites: Various DOE sites in audit scope. Report recommendations are addressed to DOE Headquarters Program Offices:

DOE Office of Environment, Safety and Health, Washington, DC, Germantown, MD
DOE National Nuclear Security Administration, Washington, DC
DOE Office of Environmental Management, Washington, DC
DOE Office of Independent Oversight and Performance Assurance

9. Finding Summary:

The Department is making progress in implementing its Chronic Beryllium Disease Prevention Program (Prevention Program). However, we noted opportunities for the Department to strengthen implementation by addressing Prevention Program weaknesses and determining Prevention Program applicability to certain workers. Specifically, we noted that although the Department has identified a number of Prevention Program policy weaknesses, it has not yet fully addressed them. In addition, we found that while the Department has initiated actions to address Prevention Program applicability at its Paducah and Portsmouth Gaseous Diffusion Plants, the extent of applicability has not yet been resolved. Until the extent of applicability is determined, United States Enrichment Corporation workers at Paducah and Portsmouth may not receive benefits comparable to those of the Prevention Program, such as medical monitoring and surveillance benefits.

10. Keywords: (include as many as you like)

Worker Safety and Health

Beryllium Exposure

Chronic Beryllium Disease Prevention Program

Beryllium Facility Inventory
Equipment and Facility Characterization and Sampling
Prevention Program Policy
Work for Others
DOE Office of Environment, Safety and Health
DOE National Nuclear Security Administration
DOE Office of Environmental Management
Portsmouth/Paducah Project Office
United States Enrichment Corporation